

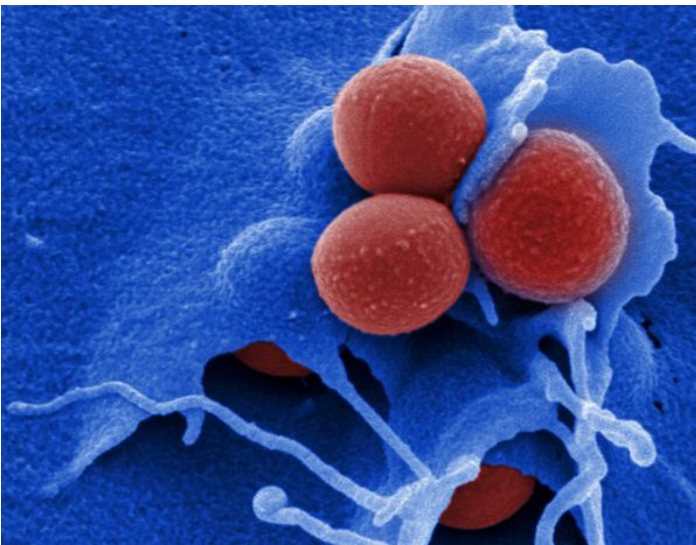
## Press Release

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### NEW HOPE IN FIGHT AGAINST MULTI-RESISTANT GERMS INTERNATIONAL ANTIBIOTICS STUDY: HZI RECEIVES €6M FUNDING

**An increasing number of bacteria is evolving antibiotic resistance. Much-feared representatives of this steadily growing group include Staphylococci strains. At this point, multi-resistant forms of the bacterium *Staphylococcus aureus* - the "hospital germ" known commonly by its acronym, MRSA - can only be treated with a select subset of antibiotics as many drugs have simply stopped working. This is precisely why the field of medicine is in desperate need of new treatment options.**



Staphylococcus aureus bacteria, magnified by electron microscopy. © HZI / Rohde

One highly promising drug candidate is now scheduled for testing in clinical trials. The substance, developed by the British pharmaceutical company GlaxoSmithKline, is still known by its rather cryptic working name, GSK1322322. In the course of clinical trials to evaluate new drugs, physicians typically end up with large numbers of patient samples that are invaluable in studying the different diseases patients are suffering from - samples that have, until recently, rarely been recruited for research purposes. Now, scientists at the Helmholtz Centre for Infection Research (HZI) in Braunschweig, Germany, and at the TWINCORE Centre for Experimental and Clinical Infection Research in Hannover, Germany, aim to study such patient samples for a five-year-period. Part of a special collection at the Hannover Medical School's biobank, the samples will allow researchers to find out more about the etiology, course, and characteristic marker substances of infectious diseases. IMI, the Innovative Medicines Initiative, has awarded the scientists research grants totaling 6 million Euros as part of the COMBACTE (Combating Bacterial Resistance in Europe) project. IMI is a joint initiative by the European Union and the pharmaceutical industry. Dr. Frank Pessler, who heads TWINCORE's "Biomarkers in Infectious Diseases" research group, secured the grant and is the project's coordinator at HZI. Under his helmage, the scientists, along with their colleagues in Paris, Barcelona, and Philadelphia, will be searching for biomarkers - molecules that are unique to a particular disease and which may provide information about if the diagnosis was correct and whether or not the therapy is working.

The new antibiotic, GSK1322322, targets gram-positive bacteria including methicillin-resistant strains of *Staphylococcus aureus* - notorious MRSA - capable of causing serious skin and wound infections. Gram-positive germs are also frequently the culprit behind pneumonia. The drug targets the bacterial enzyme peptide deformylase. Phase I clinical trials, designed to evaluate a new drug's tolerability and safety profile, have already successfully concluded and showed only minor adverse effects. If the next study shows that GSK1322322 does not bestow any added benefit compared to current treatments, it will not be admitted into the next round of clinical trials. "This is where COMBACTE's added scientific value comes into play. In case this happens, the samples that were obtained will still offer insights into the infections they were supposed to treat, and perhaps aid in developing other better treatments" Frank Pessler explains.

Besides Pessler's own group, research teams headed by Prof. Susanne Häussler, Prof. Singh Chhatwal, Prof. Dietmar Pieper, Dr. Eva Medina, Prof. Irene Wagner-Döbler, Dr. Robert Geffers and Prof. Frank Klawonn are also involved in the project. Each team contributes its own special know-how, and, in concert, they are an excellent force. Adds Pessler: "Where else do you find this many experts from all these different disciplines under one roof, some of them even on the same floor? It makes the whole collaboration smooth and efficient."

**The Helmholtz Centre for Infection Research:**

Scientists at the Helmholtz Centre for Infection Research in Braunschweig, Germany, are engaged in the study of different mechanisms of infection and of the body's response to infection. Helping to improve the scientific community's understanding of a given bacterium's or virus' pathogenicity is key to developing effective new treatments and vaccines. [www.helmholtz-hzi.de](http://www.helmholtz-hzi.de)

**TWINCORE, Centre for Experimental and Clinical Infection Research:**

At TWINCORE, physicians and scientists from different disciplines are working hand in hand in infection research. The focus is on translational research - at the interface between basic science research and clinical development. TWINCORE is a joint venture by the HZI and MHH, the Hannover Medical School. [www.twincore.de](http://www.twincore.de)

**GlaxoSmithKline:**

GlaxoSmithKline - one of the world's leading research-based pharmaceutical and healthcare companies - is committed to improving the quality of human life by enabling people to do more, feel better and live longer. For further information please visit [www.gsk.com](http://www.gsk.com)

**Innovative Medicines Initiative:**

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**List of research affiliates for this sub-project:**

Helmholtz Centre for Infection Research, Braunschweig, Germany

TWINCORE, Centre for Experimental and Clinical Infection Research, Hannover, Germany

Hannover Medical School, Hannover, Germany

Hospital Clínic de Barcelona, Barcelona, Spain

Faculté de Médecine Necker, Paris, France

GlaxoSmithKline, Philadelphia, USA